

IN THE CLAIMS

1-21. (Cancelled)

22. (Currently Amended) An arrangement for the optical detection of light radiation which is excited and/or backscattered in a specimen, comprising:

means for focusing specimen illumination in and/or in the vicinity of a pupil plane of a beam path between a specimen plane and a detection plane; and

apparatus being provided in said pupil plane for spatially separating the illumination light from the detection light; wherein said apparatus comprises a beam splitter.

23. (Previously Presented) The arrangement according to claim 22, wherein fluorescent light and/or luminescent light and/or phosphorescent light and/or diffusely scattered illumination light coming from the specimen is detected.

24. (Previously Presented) The arrangement according to claim 22, wherein the apparatus for spatial separation comprises at least a reflecting first portion and at least a transmitting second portion, wherein the reflecting portion serves to couple in the illumination light and the transmitting portion serves to pass the detection light in the detection direction, or the transmitting portion serves to couple in the illumination light and the reflecting portion serves to couple out the detection light.

25. (Previously Presented) The arrangement according to claim 22, wherein a beam splitter is provided which has a central portion which is constructed so as to be reflecting or transmitting and which is surrounded by a second portion which is constructed so as to be transmitting or reflecting.

26. (Previously Presented) The arrangement according to claim 25, wherein the beam splitter is constructed as a pole splitter.

27. (Previously Presented) The arrangement according to claim 25, wherein scanning is carried out with the beam splitter.

28. (Previously Presented) The arrangement according to claim 22, with oblique illumination for a wide field microscope.

29. (Previously Presented) The arrangement according to claim 28, wherein a lens which is displaceable vertical to the optical axis is provided.

30. (Previously Presented) The arrangement according to claim 22, wherein a wide field microscope with structured illumination is provided.

31. (Previously Presented) The arrangement according to claim 30, wherein a depth-resolved detection of the specimen is carried out.

32. (Previously Presented) The arrangement according to claim 22, in a laser scanning microscope.

33. (Previously Presented) The arrangement according to claim 22, wherein a line scanner is provided.

34. (Previously Presented) The arrangement according to claim 33, wherein the scanning line is overlaid with structured illumination.

35. (Previously Presented) The arrangement according to claim 33, wherein the length of the line is varied by varying the focal length and/or imaging scale of a microscope arrangement.

36. (Previously Presented) The arrangement according to claim 33, wherein the length of the line is varied by means of adaptive optics.

37. (Previously Presented) The arrangement according to claim 33, wherein the length of the line is varied by an adjustable diaphragm.

38. (Previously Presented) The arrangement according to claim 22, with descanned detection.

39. (Previously Presented) The arrangement according to claim 22, with partially descanned detection in one direction.

40. (Previously Presented) The arrangement according to claim 22, with nondescanned detection.

41. (Previously Presented) The arrangement according to claim 22, wherein the detection is carried out by a CCD camera.

42. (Previously Presented) The arrangement according to claim 22, wherein a sampling and/or detection of selected specimen areas is carried out.